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FOREIGN SERVICE DESPATCH

FROM : Amembassy TRIPOLI

457
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APR. 25 1961

TO : THE DEPARTMENT OF STATE, WASHINGTON.

April 22, 1961
DATE

645

REF : CERP: Section D, Items IV-A-5, IV-B-5, VI-A-3.

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	REC'D 5-1	INFO OTHER RUMR-2 INR-7 E-7* ICA-11* P-3 ID-4 CIA-10 COMM-10** IR-3* FRB-3 XMB-4 TAR-2 INT-7

SUBJECT: Transmission of USOM Reports Containing Economic Information Relating to CERP Needs.

AGR-8 HEW-5

The Embassy transmits as Enclosure No. 1 six (6) copies of a USOM/Tripoli End of Tour Report (TOICA A-996), prepared by Paul Agnano, who served as Chief Sanitary Engineer from January 1957 through March 1960.

Comment: The report contains useful information on some of the problems encountered by USOM personnel endeavoring to implement an aid program under difficult local conditions, such as frequent changes in the staffs of Libyan governmental agencies, inefficiency of local manpower, etc.

For the Ambassador:

James H. Boughton,
First Secretary of Embassy.

cc: Benghazi
USOM/Tripoli

773.5-MSP/4-2261 CS

DEPARTMENT OF STATE A/CDC/IR
REVIEWED BY GM Razi DATE 5/6/82

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Encl 1
Desp 457
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PAGES
1 OF 13

DATE SENT
15 April 61

DATE REC'D.

REPORTS- E. of T.
X HEALTH-Reports
XX PERS-A

SUBJECT - [illegible] End of Tour Report, Paul Agnano

REFERENCE (Cite case number and all previous correspondence)

DISTRIBUTION	ACTION	INFO	ADDRESS AND SERIAL NUMBER
AFRICA			
DEC.	X		ICA/Washington TOICA A-996

Attached herewith is the End of Tour Report of Paul Agnano, Chief [illegible] Division, covering the period from January 1957 through March 1961.

Bruce Thom, for
BRYANT
Acting

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AUTH	DRAFTED BY	OFFICE	PHONE NO.	DATE
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E.O. 12356, Sec. 4, 1982

END OF TOUR REPORT

Paul Agnano
Chief Sanitary Engineer, Health & Sanitation Division
USOM/Libya

This report covers the period of assignment of the writer in Libya from January 1957 - March 1961. The principal assigned duties and responsibilities during the tour, as defined by the organizational pattern of the Health and Sanitation Division, were those associated with the designation as country-wide Project Leader for the Development of Domestic Water Supplies Project. However, during the tour numerous and varied administrative assignments and responsibilities outside the area of the project were assigned to and assumed by the writer. In addition, technical guidance and assistance was been rendered during the tour to the Chief, Health and Sanitation Division, and the several project leaders in problems involving engineering aspects of the various projects and the total [illegible] program activities.

Reference is a report prepared by the writer on the project history and analysis of the development of Domestic Water Supplies Project, which is intended to accompany the program of the end of tour report. Due acknowledgement is given to the several public affairs sanitary engineers who served in Libya during this period and rendered service on the provincial project activities, and to other Division and Libyan personnel rendering services directly or indirectly associated with the project programming, activities, and accomplishments.

PROJECT HISTORY AND ANALYSIS

DEVELOPMENT OF DOMESTIC WATER SUPPLIES

PROJECT NO. 70-52-908

Description of Project

The project was first programmed in 1955 and is a continuing country-wide project for the development and rehabilitation of domestic water supplies for municipalities, villages and rural population groups. Priority of work was established to provide adequate quantities of potable water to population centers where developed sources of supplies are non-existent and where existing supplies are unfit for consumption by quantity or sanitary quality.

During 1954 to 1956 engineering studies and surveys were undertaken to [illegible] scope of the project and to determine a basis on which to plan the program of

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[illegible]. Initial activities involved the rehabilitation of rural wells and cisterns used as sources of domestic water supplies throughout the Province of Tripolitania. The activities have now been extended to Cyrenaica. The rural well rehabilitation program was organized and implemented as a direct Libyan American Joint Public Health Service operation utilizing project personnel and materials and equipment resources. Yearly work plans were formulated and reviewed with the Ministry of Health for concurrence and implementation.

In 1957, activities were begun on the development of community water systems at Sebha, Fezzan; Misurata, Tripolitania; and Tobruk, Cyrenaica. Activities have been extended to other priority communities in the three provinces. Assistance was given to established priority municipalities by rendering technical guidance, by direct Libyan American Joint Public Health Service installation of facilities; and by means of grants-in-aid to the Provincial Public Works Departments, as expedient. The project also provides for training and demonstration activities in the fundamentals of plant management, operation and maintenance of water supply systems for domestic use.

[illegible]

The basic rationale for the development of domestic water supplies was stated briefly by Dr. H. M. Bailey, Chief of the Sanitation Division of the World Health Organization, "A safe and adequate water supply is the best for all human progress." Renewed and concerted emphasis is being given to the provision of safe and adequate water supplies to all peoples of the world through a World-wide Program for Community Water Supplies promoted by ICA, WHO, and other cooperating agencies.

The Libyan [illegible] project was conceived to meet an immediate need generated during World War II and the post war years, in which period water supplies and systems were developed, enlarged, and in many instances allowed to lapse into deterioration and disuse because of lack of maintenance and supervisory control. It was recognized as essential that at least minimum domestic water need be provided in the rural areas and communities on a base on which an effective public health program could be developed in the country.

[illegible] responsibility for the construction and maintenance of water systems vested with municipalities, Provinces, and responsibility for the safe quality of the water for human consumption rests with the Ministry of Health. [illegible] initially assumed by the health departments. In addition, [illegible] were incapable of progress in meeting the needs for adequate water supply [illegible] because of limited resources in funds, equipment and personnel, the project, therefore, was designed to assist the responsible agencies in accomplishing an adequate level of the domestic water supply facilities in the country.

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The objective of the project is to provide essential water supply to the neediest rural areas and organized communities. Installation of equipment and facilities are of minimum requirements and complexity to avoid excess burden on the benefitting communities for operation and maintenance of the facilities. Proposals are offered to the responsible local authorities for the establishment of service rates to provide revenue for the operation and maintenance of the facilities and to assure conservation of the critical water supplies for essential domestic uses.

Project Goals and Problems

Results of the preliminary engineering surveys indicated need for improvement of a great majority of the rural water supplies derived mostly from unprotected dug wells, and the need for development or rehabilitation of domestic water supplies in twelve communities involving an estimated population of 93,000.

Because of the relatively greater populations affected in both rural areas and communities, the initial project activities were concentrated in Tripolitania. Records indicate that required improvements and installation of facilities in the priority areas were to be implemented in cooperation with the Provincial Public Works Department. Project history also shows that work implementation was excessively delayed because of the several incapabilities of the local Public Works Department.

In an attempt to expedite project implementation, plans were made for construction of water systems by direct LAPHS operations. Accordingly, a U.S. well drilling contractor was imported into Libya to expedite exploratory well drilling for location of water sources and to undertake installation of the necessary equipment and facilities. Progress and accomplishments utilizing the services of the off-shore contractor left much to be desired. In the course of two years of contract operations, one water system was completed at Misurata and two non-productive wells were drilled at Qussabat. The cost of the effective services were excessive and progress performance was generally unsatisfactory. Subsequently, work involving the installation of water supply systems was undertaken in cooperation with the local Public Works Departments to the maximum extent possible. It is felt that even at the expense of delayed progress in work planned, greater long range benefit will accrue to the local governmental agencies and communities through the utilization of local government personnel and local contractor services.

Off-shore commodities requirements procurement and delivery schedules have been certain area problems in effective planning and implementation of works. Past experience indicates that the average delivery of commodities requires eight months to one year.

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In prior years project funding procedures, the latitude of carry-over of funds facilitated the budgeting of sub-projects, continuing beyond a single fiscal year. The provisions of the current Project Agreements do not allow for carry-over of funds allocated for completion of a specific job and, further, PIO/C's are required for equipment and materials early within the period of the Pro-Ag in effect.

The administrative reasons for the procedures are appreciated, however, in the case of developing community water supplies, extended exploratory drilling has to be done in search of suitable sources of water. In a number of instances the results of the drilling operation are negative and the entire approach and plans have to be modified. Submitting specifications for specific pumping equipment particularly, prior to the results of drilling tests, cannot be accomplished until basic data as to depth of well, yield of water, distance water has to be conveyed from source to community, etc., have been determined from the exploratory drilling operations. Comparable data is also necessary for the preparation of specifications for piping and auxiliary materials.

Provisions of the current Pro-Ag also threaten non-completion of jobs awaiting the arrival of off-shore commodities because other costs funds allocated for installation of facilities cannot be expended or obligated prior to the end of the fiscal year concerned. Other provisions of the Pro-Ag requiring U.S. type specifications and world-wide tendering for commodities are not acceptable to the local Public Works Departments technicians because of the possibility of receiving a variety of equipment not familiar to them and not amenable to requirements for standardization of equipment, spare parts and maintenance services.

In the implementation of water development project activities, and as a matter of fact all public health program activities, the American technician is dealing in most instances with several groups of third-country national technicians from the planning phases through the execution of projects. In Tripolitania, Italian technicians are employed by the Mutasarrifates of Health and Public Works; in Cyrenaica, British technicians are employed in key positions; and in the Fezzan, French medical personnel and Egyptian engineers are employed. Each group brings with it different concepts and preference for types of facilities, equipment and materials familiar to it.

In addition to the variety of concepts brought into the country by the third-country technicians, frequent changes in the staffs of the provincial governmental organizations make continuity of project planning and execution difficult, and in some cases impossible. For example, in Cyrenaica, since 1951, the Mutasarrifate of Health has changed seven Mudirs and a larger number of Directors of Medical Services, a position regarded as the technical advisor to the Mudir and counterpart of the U.S. technicians.

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There appears to be little or no opportunity to correct the problems inherent to the staffing changes of the provincial health departments. Improvements may be accomplished, however, in the areas of more direct responsibility within the Mission, particularly as regards to funding procedures, procurement and possibly the method and kind of project assistance extended to the local governments.

Accomplishments

Rural Water Supplies: Since the beginning of project field activities in 1956, 320 shallow wells and several cisterns have been rehabilitated and sanitized to serve upward of 80,000 people in dispersed and remote rural population centers throughout Tripolitania. The project activities were planned and programmed in cooperation with the Nazarate of Health. Actual field work was undertaken as a direct LAJPHS operation, including staff, vehicles, equipment and local costs funding.

Similar activities were begun in Cyrenaica in 1960 where six rural wells have been rehabilitated to serve approximately 4,000 persons in four population centers. Activities in Cyrenaica are undertaken in cooperation with P.W.D. staff supported by project vehicle, equipment and local cost expenditures.

Community Water Supplies:

Sebha, Fezzan. A complete public water supply system including deep wells and pumps, elevated concrete reservoir, and 5 kilometers of distribution lines was completed in August 1958 to provide Sebha and two fringe settlements with their first piped water supply. The original installation provided for 100 metered house connections, and 20 public fountains; actual population utilizing the system is approximately 7,000 persons. The system was constructed totally by project funds and staff, including design and construction, utilizing local contractor services.

Misurata, Tripolitania. Preliminary to the development of a complete public water supply system in Misurata, exploratory well drilling operations were begun in July 1957 utilizing off-shore contractor services. Operations continued for a period of one year before an adequate supply of good quality water was located at a source 13½ kilometers from Misurata. Installation of the basic facilities including three deep drilled wells and pumps, concrete storage reservoir, 13½ kilometers of supply main and 3 kilometers of distribution lines was completed in August 1959. The system has undergone a period of test and minor improvements prior to turnover of the municipality for operation and maintenance responsibilities. Prior to the installation of the new system, the water supply needs of the inhabitants were met by distribution of well water through the obsolete public system for sanitary and washing purposes, and by horse to house delivery of fair quality water by tank truck and cart for drinking and culinary purposes.

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Other project activities completed or underway in Tripolitania include:

Gasima: Rehabilitation of springs and supply mains and drilling of deep well equipped with pump to supplement community water supply. The completed improvements have resulted in an increase of 50% in the water supply available to the community.

Qussabat: Exploratory drilling and other investigations are underway in an attempt to locate an adequate source of water amenable to development for a public supply. Designs for a community system have been completed and funds are allocated for installation of the facilities.

Suk el Guma: Project funds and technical assistance have been made available for the construction of a storm water drainage sewer for the protection of the community center of Suk el Guma and access road to Wheelus Base. Completion of the facility was a cooperative LAFFIS-P.W.D. undertaking.

Sliten: Plans for a community water system have been completed and exploratory drilling is underway in an attempt to locate an adequate source of water to supply the domestic needs of the community. Funds for installation of the facilities were programmed in FY 59/60.

Principal project activities which have been completed or are underway in Cyrenaica are:

Tobruk: A number of deep wells have been drilled to supplement the present sources of water. Improvements to the community distribution system include the completed construction of an elevated concrete reservoir of 50,000 gallon capacity and replacement of 10 kilometers of deteriorated water mains throughout the community.

The rapid development of housing and increase in population in Tobruk has placed the improvement of water supply and electricity facilities as first priority of needed public utilities services.

A water distilling plant of U. S. manufacture has been installed at the new Tobruk Hospital to supply 5,000 gallons per day of potable water for the essential needs of the hospital.

Derna: An elevated concrete storage reservoir of 75,000 gallons capacity has been completed and is scheduled for rehabilitation of the deteriorated water system facilities. Drilling of additional wells is also planned to supplement the present sources of water supply. The system is designed to serve 5,000-6,000 population.

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Girgaya: Installation of water piping and storage facilities is underway and procurement of a water treatment plant has been processed for early delivery to provide the remote desert community of 1,000 with a potable water supply system.

Gygaya: In cooperation with Joint Services Agriculture and P.W.D., a combined potable water supply and irrigation system is under development for the community of 500 and the surrounding rural population of several thousand inhabitants.

Dongrily: Funds have been provided for the construction and equipping of a booster pumping station to meet the rapidly increasing water demand in the city.

Economic Returns, Social and Political Impact

The availability of adequate quantities of safe water is fundamental to both modern healthful living and economic growth of the community. Piped water to the homes not only cuts the chain of transmission of water-borne disease, but also makes possible personal and environmental cleanliness essential to the prevention of the filth-borne diseases. The provision of adequate quantities of safe water is the foundation on which a sound and effective community public health program must be built.

From the economic point of view, the provision of adequate safe water, with general health services, increases the earning capacity of the work force of the community and decreases the burden of welfare support and medical care services recognized as a prime responsibility of the government. Piped water is a basic prerequisite for development of industry, commerce and tourism. In newly developing countries the installation of water facilities provides stimulus for public works of many types and tends to catalyze urban improvement.

Political impact considerations may be regarded as generally more immediate and direct than many of the "long range" type of projects. Water supplies are essential basic needs of all the inhabitants. The fulfillment of the needs are immediately recognized and readily utilized. The development of domestic water supplies project requires no campaigning or long range demonstration activities, acceptance is ready, and numerous proposals for justified project activities are offered by the responsible government officials.

Benefits derived from the provision of adequate quantities of safe water accrue to all aspects of community development and welfare. In the "older" countries and those more advanced in the process of development, water supply is regarded as a commodity which should be paid for by the consumer. In Libya, water supplies are regarded as the responsibility of government and are subsidized in whole or in part from provincial or federal administration funds. Most of the smaller organized communities are incapable of generating funds for the construction

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of relatively expensive water supply systems and have in the past been denied the benefits of the services or water systems have been supported by central government or outside aid funds.

The costs of development of water supplies in Libya are excessive as compared to installation under "average country" conditions. The factors contributing to the high costs of water supply systems are several. Foremost is the scarcity of adequate sources of underground water amenable to development. Libya may be regarded country with no streams or lakes, low rainfall averaging 10 inches per year over the populated coastal belt, and is extensively underlain with saline aquifers producing water of saline or marginal quality. Extensive and costly ground water exploratory operations must, of necessity, precede the development of water supply systems. Other factors influencing the cost of installation are the necessity of importing all equipment and materials from foreign sources and the high local contractor costs for installation of the facilities. With full recognition of all factors influencing the cost-benefit ratio, it must be recognized that, within local limits, "potable water in Libya is worth what it costs."

Project Investments

Support of project activities from 1955 through 1958 has been totally from TCA funds except for token contributions in kind in the form of P.O.L. for project vehicles and estimated rental value of storage warehousing space for storing of project equipment and materials. Access to land for installation of permanent water supply structures is provided by the local governmental agency concerned. Contributions in manpower have been solicited from the benefiting local population groups during the early period of the rural well rehabilitation program. The net contribution in value and effort was inconsequential. Experience dictated the discontinued use of local labor contributions in the interest of expediting operations.

Water supply development activities in Tripolitania and Fezzan have been undertaken on direct LAPHS operations involving planning and design of facilities with project engineering staff and installation of facilities with project personnel, local contractor services or off-shore contractor services. In Cyrenaica, project activities are undertaken in cooperation with the Provincial Public Works Department supported by grants-in-aid for procurement of commodities and for local costs expenditures. Contribution in kind is made in the nature of services of P.W.D. supervisory field staff rendered during installation of the facilities. The arrangement precludes the requirement for LAPHS field staff in Cyrenaica and transfers responsibility for implementation and completion of work to the local governmental department.

During FY/59 U.O.T. (Tripolitania Administration) provided direct financial support for two project activities, the storm water drainage system at Suk el Gruma

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and the Misurata water supply. ICA contribution for the Suk el Guima drainage is LL31,000 and G.O.L. contribution is LL10,000 or 1/3 of the total construction costs. Contribution by G.O.L. for minor modifications to the Misurata water system is LL2000 as compared to ICA contribution of LL3000.

The total ICA contributions to the project from initial programming in FY 55-56 through FY 60-61 amount to $2,405,000; annual allocations are as follows:

FY 55-56 $215,000. FY 56-57 $430,000. FY 57-58 $760,000. FY 58-59 $276,000. FY 59-60 $534,000. FY 60 61 (Partial) $190,000.

Conclusions and Recommendations

Success of the project can be measured on the basis of rural water supplies and community water supplies completed and in process for eventual completion as proposed previously under "Accomplishments". From operations experience and observations of the revised progress capabilities of the local public works departments for rehabilitating and developing water supplies in the critical priority areas of the country, it is considered possible to assume that few, if any, of the activities completed would have been accomplished without project assistance as rendered.

Immediate benefits realized from project accomplishments are the provision of adequate and safe water supplies to a substantial population in both the rural areas and several communities which, for years, have been deprived of this basic and essential commodity for healthful living and economic growth of the community. Long range benefits are the concepts of design and construction of the facilities and the introduction of water supply facilities and plants which will remain as demonstrations for future works. In Cyrenaica, the rural wells rehabilitation program has stimulated the training of a small staff of local P.W.D. employees which will be capable of continuing the operations following the integration of the services into the local governmental department.

Prolonged operations extending beyond programmed completion dates and relatively high costs of completed facilities may be regarded as failures, but must be tempered with the many influencing factors characteristic of the initial impact character of the project and the local conditions mentioned previously under which operations are to be carried on.

Because of the professional qualifications of the responsible government officials concerned, most of the project activities has been "routine" and lacking in full appreciation of the department's responsibilities in the construction, maintenance, operation and control of sanitary quality of water supplies.

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Past experience involving unilateral project activities in Tripolitania and Fezzan and cooperative activities with P...D. in Cyrenaica suggest a transfer of the technical and construction phases of the project from the Nazarates of Health to the Nazarates of P...D. Administrative control for approval of plans for facilities and control of the sanitary quality of public water supplies should be retained in the Nazarates of Health as the logical agency to exercise this responsibility.

Experience in Tripolitania and Fezzan also has shown that unilateral project activities financed in total with project funds have not generated the complete cooperation and interest in responsibility for the facilities or the requirements for maintenance and operation. Responsibilities for technical aspects of facilities construction and maintenance and operation rests with third country national employees of the departments who display minimum regard for the economic aspects of facilities design and construction or the application of management principals to develop the cost supporting or revenue producing potentialities of public water supply systems.

In view of past operations experience, and in view of the fact that the Provincial P...D.'s are the logical governmental construction agencies for water supply facilities, recommendation of transfer of action agency responsibilities to the Public Works Departments for future project agreements is indicated.

Further, it is recommended that the extent of ICA project assistance be limited to costs of off-shore commodities and to off-shore contract services, if required, to allow for participation in local costs requirements by the benefiting local agency concerned. It is intended that the requirements for local costs participation will relieve the Health Division of construction operations responsibilities and develop in the locality an interest in completed facilities, for required future expansion of facilities, and maintenance and operation essential to derive the maximum objectives and benefits from the project activities and aid assistance.

Since the dissolution of the Joint Service in November 1960, further delay has been experienced in the completion and implementation of programmed water supply systems and facilities. With the termination of direct operation responsibilities of the U.S. Army as a result of integration of IAAS into the Government of [illegible] execution of project activities depends primarily on the staff capabilities and administrative procedures of the local governmental agencies.

Accordingly, it is also recommended that programming of project funds past FY 60-61 be deferred pending re-evaluation of the project scope and objectives and also for the purpose of providing opportunity for programmed project activities to "catch up" with previous years and current year funding. Reasonable project objectives, rather than programming based on the level of assistance funds available, should be the keynote.

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